



# Food safety performance in animal sourced food value chains

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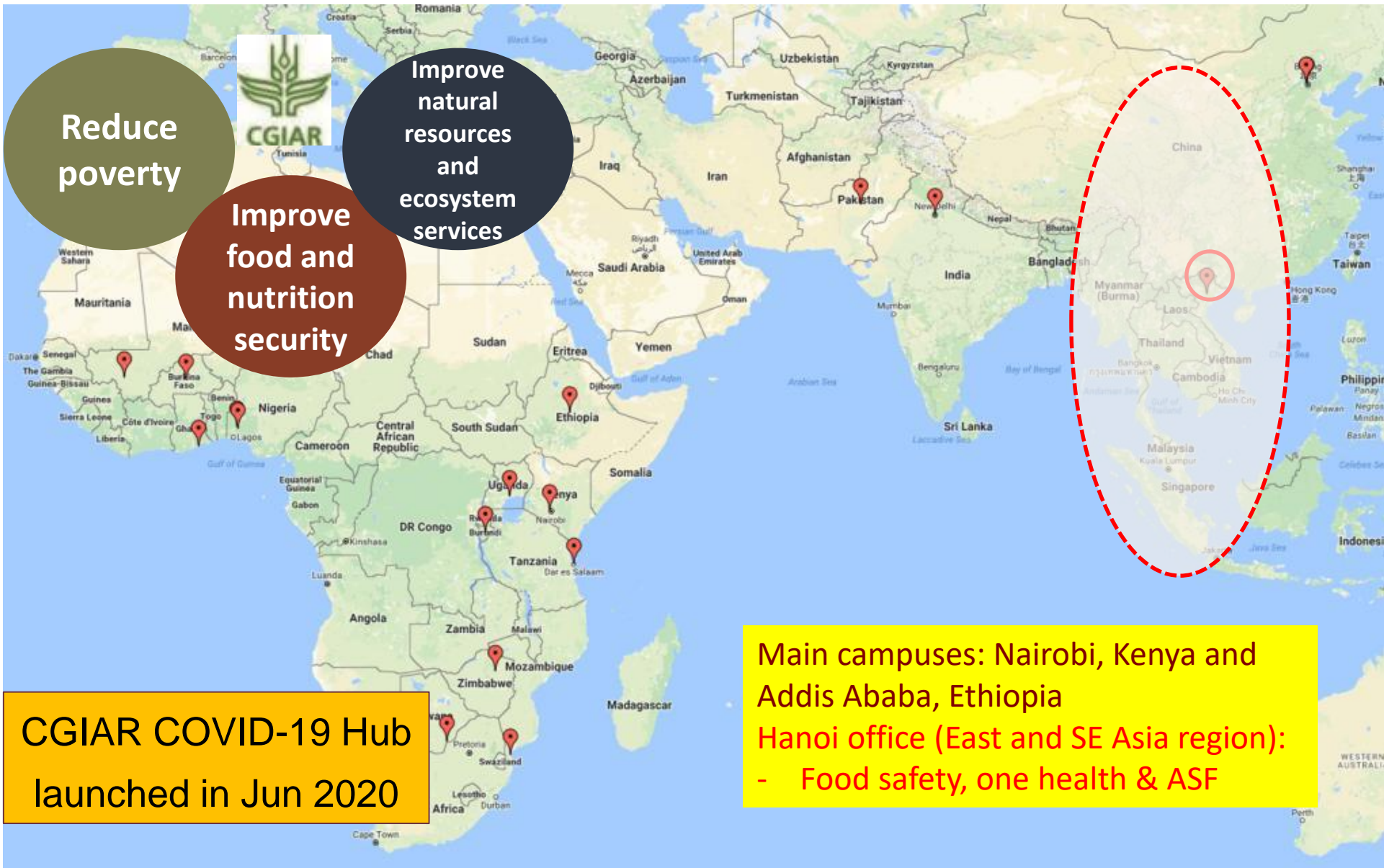
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20<sup>th</sup> October 2020, Universitas Nusa Cendana, Indonesia

1ST INTERNATIONAL CONFERENCE ON VETERINARY AND ANIMAL SCIENCE (Icon-VAS)  
'THE ROLE OF VETERINARY SCIENCE TO COPE WITH PANDEMICS'

# International Livestock Research Institute (ILRI)

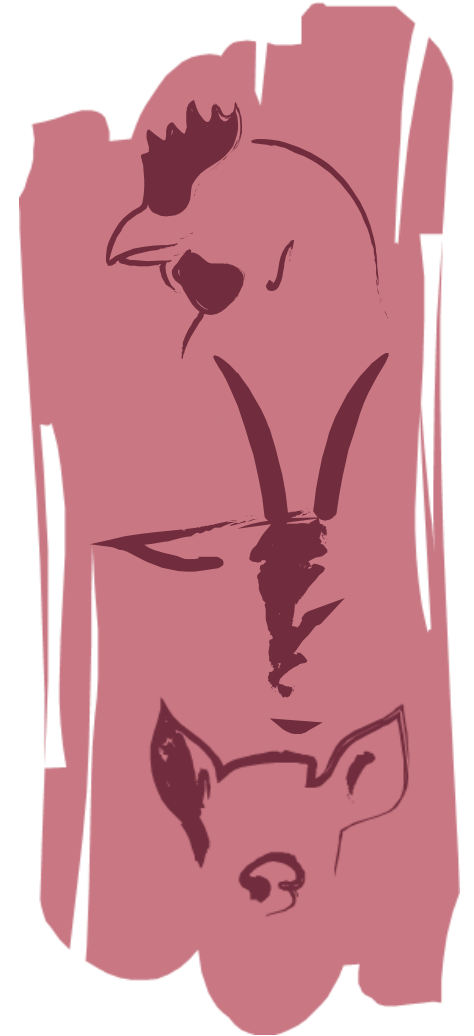
- Part of CGIAR system with 15 research centres worldwide



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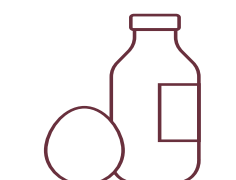
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- Food safety - global
- Food safety performance - Vietnam
- Intervention example
- Way forward (including COVID-19 & wet markets)





HEALTH



FOOD

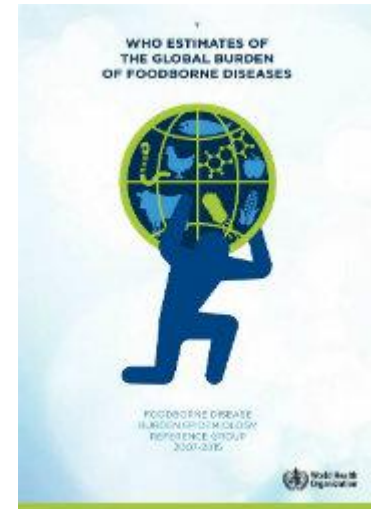
## Food safety – global perspective



### WHO's report: Global estimates of foodborne diseases

- **31 foodborne** hazards causing diarrheal disease agents, invasive infectious disease agents, helminths and chemicals etc.
- Estimated global burden these 31 hazards **was 33 million** DALYs
  - **Comparable** with burden from **Malaria, HIV and TB**
- **Almost 1 in 10 people fall ill** every year from eating contaminated food and **420 000 die** as a result
- **Highest burden** observed for **Africa** (East and Central SH Region) followed by **South East Asian** (region II)

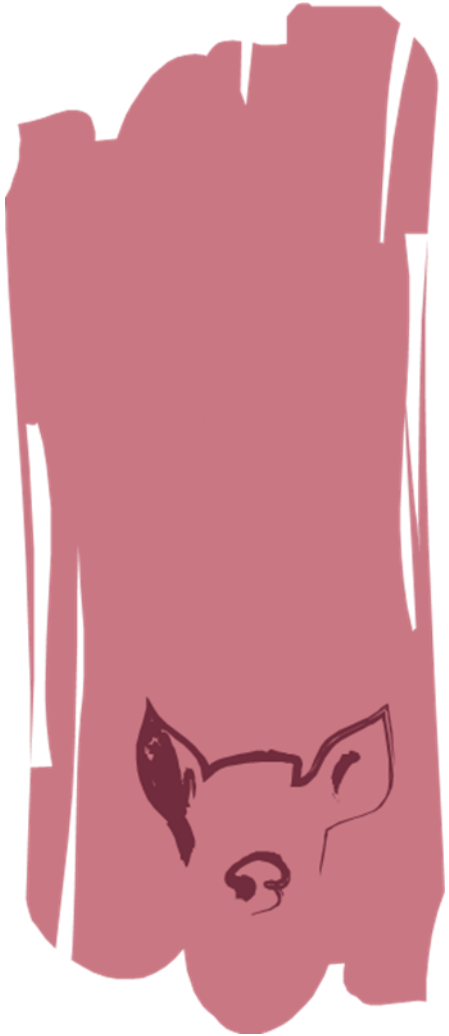
[http://www.who.int/foodsafety/publications/foodborne\\_disease/fergreport/en/](http://www.who.int/foodsafety/publications/foodborne_disease/fergreport/en/)



# Food safety Vietnam

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- **Food systems are rapidly changing** in many developing countries including Vietnam, 4-5 % grow of livestock sector
- These changes are associated with **more consumption of risky animal food**
- **Pork is most important meat** diet for Vietnamese (similar in Laos, Thailand and Cambodia)
- Most of this is **produced, slaughter and sold in traditional** markets
- **Food safety** has become an increasing **concern** (consumers & policymakers)
- Concerns include contamination with **chemical and microbiological** hazards
- **Little information on the actual risks** or how to manage them.
- Vietnam has a **modern food safety law**, but challenges exist:
  - Limited resources for surveillance
  - Weak enforcement



# Food safety performance tool **Aim & pillars:** Safety, scalability and societal concerns

**Aim:** Allow rapid assessment of food safety outcomes in value chains

**Safety:** Core of the tool using a **risk-based approach** to provide robust assessments of food safety outcomes food commodity (e.g. pork).



A value chain may provide safe food but have little potential for scaling (e.g. niche products)

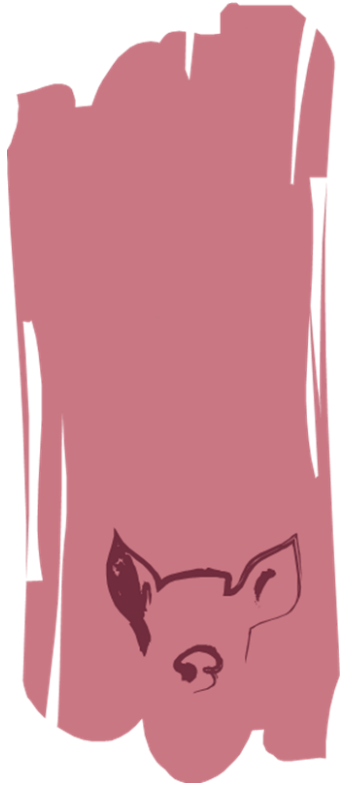


**Sustainability and scalability** assessment of the value chain.

- **Business performance** (e.g. market share, expected trends, potential for change) and supply chain **governance** (e.g. trust and interventions).

**Societal concerns**

- **supplementary to pillar 1 and 2** such as **gender** and equity, **cultural norms** etc. which may synergize or trade-off with food safety.



# How the tool was used

- **Qualitative** (focus group discussions, FGD, key informant interviews, KII)
  - > 500 KII and 12 FGD
  - Content: Business scale & trends, trust, governance, KAP, intervention (perception)
  - Farm to fork
- **Quantitative** (biological sampling and observational checklist) using a probabilistic sampling design to ensure representativeness.
  - >700 samples collected across different pork value chains
- **Value chains** (Sep 2018 – May 2019):



Traditional/  
wet market  
(all sites)



Street food, Hanoi



Canteens, Hanoi



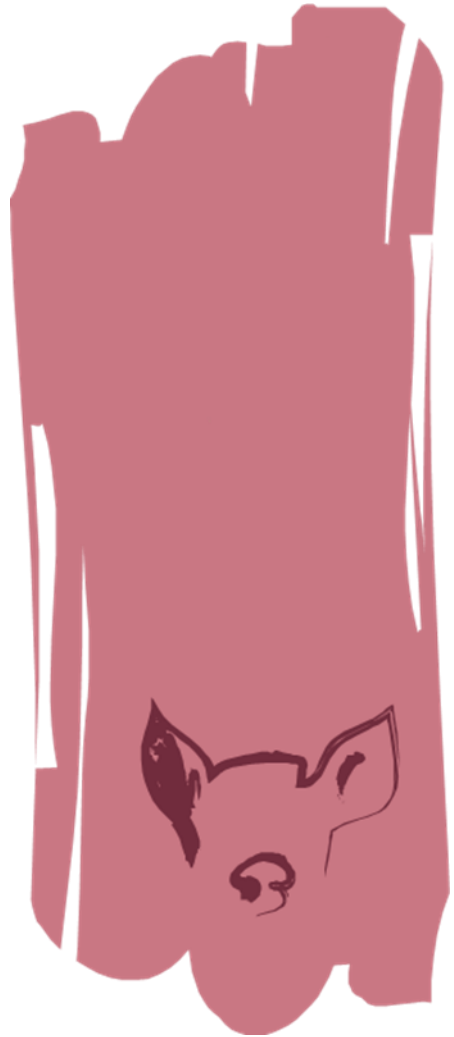
„Boutique“ food  
chains, niche but  
emerging, Hanoi



Supermarket/  
convenient  
stores, Hanoi



Native pigs,  
Hoa Binh, „safe by  
nature“



# Key results

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## Safety:

- **Poor food safety outcomes** across all retail types
- Value chain actors **incorrectly perceive** chemical **hazards** as more important than microbiological
- **Poor hygiene was blamed** as the main reason leading to foodborne disease, **but this perception wasn't** necessarily **translated into better practice**





# Key results

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## Scalability/sustainability:

- Business of **pork value chain slowly recovers** from ASF, rather minor affect of COVID-19
- Overall **trust** levels on food safety **decrease from rural to urban** areas
- Trust was **lowest with social media** and highest with TV and local radio
- **Traditional** markets and slaughter **will continue to provide most pork** and should continue to be a focus



# Key results

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## Societal norms:

- **Women seem more cautious about chemical** residues in pork/food than men.
- **Women also worry more about foodborne disease** more frequently than men.
- **Man** more in **favour of purely technical interventions** than woman

## Chosen value chains for intervention based on results from FS performance:

- ✓ Small-scale traditional sector
- ✓ Indigenous pork value chain

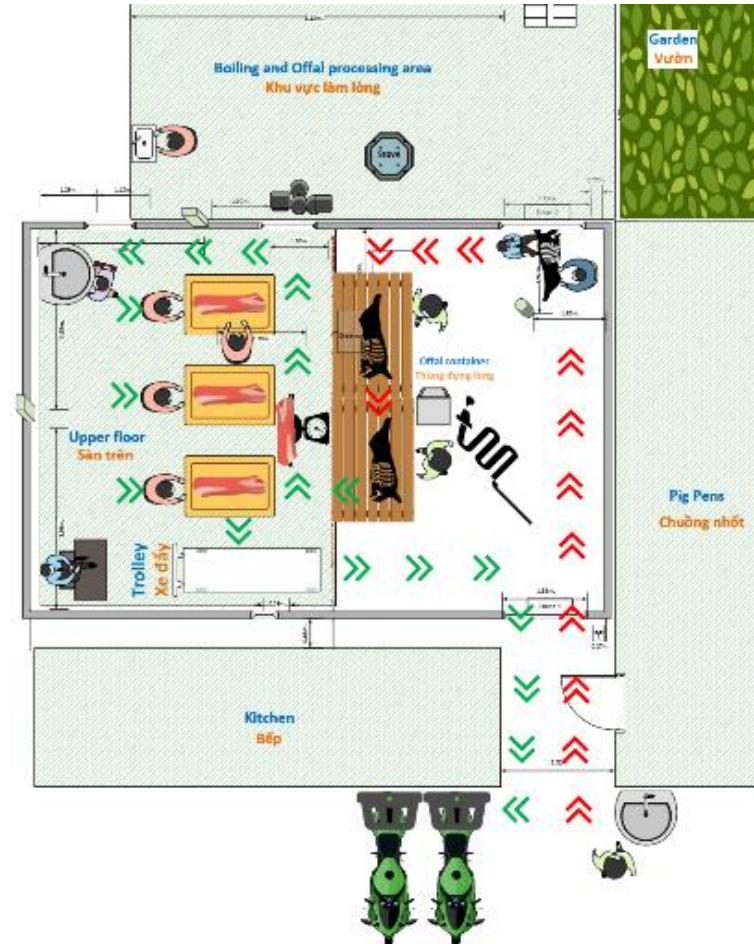


# Food safety intervention at slaughter - example

Change of workflow (clean/dirty)

Posters to support behavior change

Avoid floor slaughter

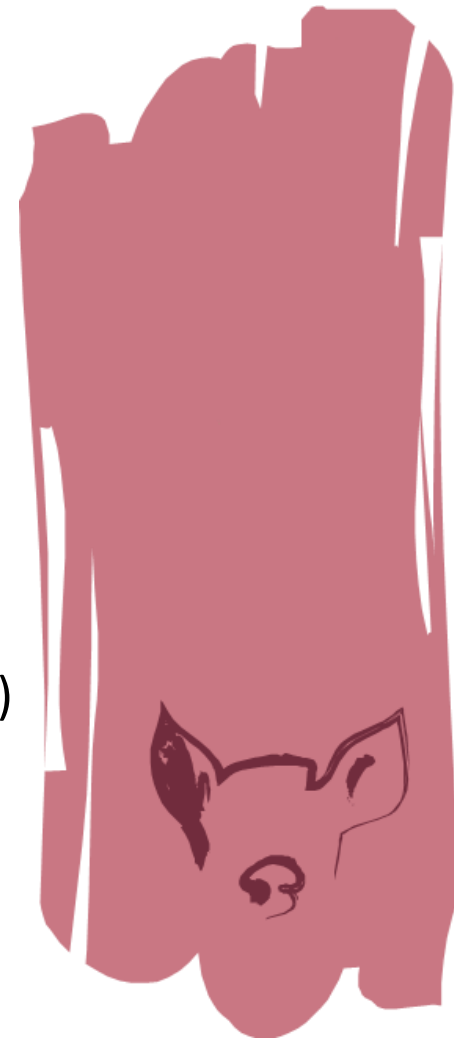


\*Photo credit: Sinh DX/Chi N ILRI 2020

- Marked decrease of coliforms; investment 100 -1500 USD
- COVID-19 concerns help to convince butchers and retailers to use disinfectant

# Way forward:

- ✓ **Scaling** of interventions including cost benefits and policy support at slaughter (on-going) but also retail (re-designed) & farm (on-going)
- ✓ **Risk communication** (all VC actors) (Nov 20)
- ✓ Research on **COVID-19 and retail** (traditional)
  - **COVID-19 Impact & concerns** e.g. to support practice change in retailers (on-going)
  - **Understanding harms and benefits** of formal and informal markets across a range of criteria: health, nutrition, livelihoods, accessibility
  - Understanding **health risk** from those markets (opposed to presence of hazards)
  - Identification of **risk mitigating, scalability** and **practices** at these





Vietnam 48<sup>th</sup> day without community COVID-19 cases!



Disinfection liquid



\*Photo credit: Sinh DX/Chi Nguyen/Unger ILRI 2020

Video: <https://www.youtube.com/watch?v=-CZVyxCG8Zk>

Research briefs: <https://cgspace.cgiar.org/handle/10568/108320>; <https://hdl.handle.net/10568/108768>; <https://hdl.handle.net/10568/108769>

Reports: <https://www.worldbank.org/en/country/vietnam/publication/food-safety-risk-management-in-vietnam-challenges-and-opportunities>

CGIAR COVID-19 Hub: <http://a4nh.cgiar.org/covidhub/>

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# Acknowledgement

